

## Supplementary TABLE 6. Virus specific response of PBMCs.

### A) Up and down regulated DEGss in PBMCs from patients with acute influenza

Gene symbol	Entrez gene name	Probe	Fold change
IFI27	interferon, alpha-inducible protein 27	202411_at	103.14
SN	Sialoadhesin ; Sialoadhesin	219519_s_at	19.18
DEFA1 ; DEFA3	defensin, alpha 1 ; defensin, alpha 3, neutrophil-spe	205033_s_at	9.88
MARCO	macrophage receptor with collagenous structure ; r	205819_at	9.52
SN	Sialoadhesin	44673_at	8.95
IFI44L	interferon-induced protein 44-like	204439_at	7.25
RSAD2	radical S-adenosyl methionine domain containing 2	213797_at	6.34
RSAD2	radical S-adenosyl methionine domain containing 2	242625_at	5.57
LOC129607	hypothetical protein LOC129607	226702_at	5.27
SRP68	signal recognition particle 68kDa	AFFX-HUMRGE/	5.21
OASL	2'-5'-oligoadenylate synthetase-like	205660_at	5.16
IFI44	interferon-induced protein 44	214453_s_at	4.54
IFIT3	interferon-induced protein with tetratricopeptide re	204747_at	4.40
IFIT3	interferon-induced protein with tetratricopeptide re	229450_at	4.36
USP18	ubiquitin specific peptidase 18	219211_at	4.32
FAM20A	family with sequence similarity 20, member A	241981_at	4.24
H1FO	H1 histone family, member 0	208886_at	4.22
PHLDA2	pleckstrin homology-like domain, family A, member	209803_s_at	4.01
MX1	myxovirus (influenza virus) resistance 1, interferon-	202086_at	3.81
RNASE2	ribonuclease, RNase A family, 2 (liver, eosinophil-de	206111_at	3.74
	Transcribed locus	231688_at	3.72
DEFA4	defensin, alpha 4, corticostatin	207269_at	3.56
SERPING1	serpin peptidase inhibitor, clade G (C1 inhibitor), m	200986_at	3.47
MS4A4A	membrane-spanning 4-domains, subfamily A, memk	219607_s_at	3.41
HIST2H2AA	histone 2, H2aa	218280_x_at	3.36
HERC5	hect domain and RLD 5	219863_at	3.28
OASL	2'-5'-oligoadenylate synthetase-like	210797_s_at	3.18
CLEC1B	C-type lectin domain family 1, member B	220496_at	3.15
		AFFX-HUMRGE/	3.14
FLJ42418	FLJ42418 protein	231455_at	3.14
G1P2	interferon, alpha-inducible protein (clone IFI-15K)	205483_s_at	3.09
MS4A4A	membrane-spanning 4-domains, subfamily A, memk	1555728_a_a	3.05
OAS3	2'-5'-oligoadenylate synthetase 3, 100kDa	218400_at	3.05
HIST2H2AA	histone 2, H2aa	214290_s_at	2.97
LY6E	lymphocyte antigen 6 complex, locus E	202145_at	2.91
OAS1	2',5'-oligoadenylate synthetase 1, 40/46kDa	205552_s_at	2.86
GMPR	guanosine monophosphate reductase ; guanosine nr	204187_at	2.86
HIST2H2BE	histone 2, H2be	202708_s_at	2.83
G1P3	interferon, alpha-inducible protein (clone IFI-6-16)	204415_at	2.83
ADM	adrenomedullin	202912_at	2.82
LAMP3	lysosomal-associated membrane protein 3	205569_at	2.78
CDKN1A	cyclin-dependent kinase inhibitor 1A (p21, Cip1)	202284_s_at	2.77

CTSL	cathepsin L	202087_s_at	2.72
PLSCR1	phospholipid scramblase 1	202446_s_at	2.65
LGALS3BP	lectin, galactoside-binding, soluble, 3 binding protei	200923_at	2.64
BIRC4BP	XIAP associated factor-1	228617_at	2.64
MASTL	microtubule associated serine/threonine kinase-like	228468_at	2.60
AXUD1	AXIN1 up-regulated 1	225557_at	2.58
	Transcribed locus	243754_at	2.57
IFI35	interferon-induced protein 35	209417_s_at	2.56
HERC6	hect domain and RLD 6	219352_at	2.55
DNAPTP6	DNA polymerase-transactivated protein 6	222154_s_at	2.54
NEXN	nexilin (F actin binding protein)	1552309_a_a	2.52
PPIF	peptidylprolyl isomerase F (cyclophilin F)	201489_at	2.51
FCGR1A ; LOC4	Fc fragment of IgG, high affinity Ia, receptor (CD64	214511_x_at	2.43
FLJ38348	Hypothetical protein FLJ38348	213294_at	2.40
HIST1H1C	histone 1, H1c	209398_at	2.37
FXYD6	FXYD domain containing ion transport regulator 6	217897_at	2.36
FRMD3	FERM domain containing 3	230645_at	2.35
MT1X	metallothionein 1X	208581_x_at	2.32
RASGEF1B	RasGEF domain family, member 1B	1554999_at	2.29
EPSTI1	epithelial stromal interaction 1 (breast)	227609_at	2.27
C6orf62	Chromosome 6 open reading frame 62	222309_at	2.26
MGC23401	hypothetical protein MGC23401	1553736_at	2.25
CKLFSF5	chemokine-like factor superfamily 5	230942_at	2.23
CDC42	cell division cycle 42 (GTP binding protein, 25kDa)	210232_at	2.22
HIST1H4H	histone 1, H4h	208180_s_at	2.21
LCN2	lipocalin 2 (oncogene 24p3)	212531_at	2.21
PRIC285	peroxisomal proliferator-activated receptor A intera	228230_at	2.19
TRIB1	tribbles homolog 1 (Drosophila)	202241_at	2.19
MT1E	metallothionein 1E (functional)	212859_x_at	2.18
OAS2	2'-5'-oligoadenylate synthetase 2, 69/71kDa	204972_at	2.16
MX2	myxovirus (influenza virus) resistance 2 (mouse)	204994_at	2.15
ZCCHC2	zinc finger, CCHC domain containing 2	219062_s_at	2.10
XK	Kell blood group precursor (McLeod phenotype)	206698_at	2.07
NEXN	nexilin (F actin binding protein)	226103_at	2.06
SOX18	SRY (sex determining region Y)-box 18	AFFX-M27830_	2.05
KLHDC7B<b>	kelch domain containing 7B	1552639_at	1.98
ARG2	arginase, type II	203946_s_at	1.97
LOC391020	similar to Interferon-induced transmembrane protei	216565_x_at	1.94
SLC30A1	solute carrier family 30 (zinc transporter), member	228181_at	1.93
FCGR1A	Fc fragment of IgG, high affinity Ia, receptor (CD64	216950_s_at	1.91
PTEN	Phosphatase and tensin homolog (mutated in multi	240964_at	1.89
		235276_at	1.89
FNDC3B	fibronectin type III domain containing 3B	229865_at	1.86
PTX3	pentraxin-related gene, rapidly induced by IL-1 beta	206157_at	1.83
LDLR	low density lipoprotein receptor (familial hyperchol	202068_s_at	1.81

C9orf72	chromosome 9 open reading frame 72	1553133_at	1.80
BIRC4BP	XIAP associated factor-1	206133_at	1.77
PLK4	polo-like kinase 4 (Drosophila)	204886_at	1.75
ZRANB3	RAB3 GTPase activating protein subunit 1 (catalytic	239527_at	1.73
FCER1A	Fc fragment of IgE, high affinity I, receptor for; alpr	211734_s_at	-4.93
IGHG1	immunoglobulin heavy locus ; immunoglobulin heavy	228518_at	-3.38
CLC	Charcot-Leyden crystal protein ; Charcot-Leyden cr	206207_at	-3.13
HCG11	HLA complex group 11	1557167_at	-3.11
RTN1	reticulon 1	203485_at	-3.05
CLLU1	chronic lymphocytic leukemia up-regulated 1	1558185_at	-2.95
CD1C	CD1C antigen, c polypeptide	205987_at	-2.85
MS4A1	membrane-spanning 4-domains, subfamily A, memb	228599_at	-2.60
TRAF3IP3	TRAF3 interacting protein 3	240265_at	-2.57
FCER2	Fc fragment of IgE, low affinity II, receptor for (CD2	206759_at	-2.56
CTSZ	cathepsin Z	210042_s_at	-2.55
PTCH	patched homolog (Drosophila)	209815_at	-2.48
		242819_at	-2.35
ABCB4	ATP-binding cassette, sub-family B (MDR/TAP), me	207819_s_at	-2.30
RALGPS2	Ral GEF with PH domain and SH3 binding motif 2	242458_at	-2.27
BLK	B lymphoid tyrosine kinase	206255_at	-2.27
PTGDR	prostaglandin D2 receptor (DP)	215894_at	-2.27
IL7	interleukin 7	206693_at	-2.22
	Homo sapiens, Similar to LOC169932, clone IMAGE:	226550_at	-2.21
KLRB1	killer cell lectin-like receptor subfamily B, member 1	214470_at	-2.20
COL4A3	collagen, type IV, alpha 3 (Goodpasture antigen)	222073_at	-2.19
NAPE-PLD	N-acyl-phosphatidylethanolamine-hydrolyzing phosph	233539_at	-2.19
	Transcribed locus	237066_at	-2.18
CCR6	chemokine (C-C motif) receptor 6	206983_at	-2.17
ARPC4	actin related protein 2/3 complex, subunit 4, 20kD	217818_s_at	-2.15
FCRL2	Fc receptor-like 2	224193_s_at	-2.13
KLF8	Kruppel-like factor 8	230986_at	-2.12
FCRH3	Fc receptor-like 3	231093_at	-2.08
HRH4	histamine receptor H4	221170_at	-2.05
GPR44	G protein-coupled receptor 44	206361_at	-2.02
FCRL2	Fc receptor-like 2 ; Fc receptor-like 2	221239_s_at	-2.02
CLEC2D	C-type lectin domain family 2, member D	228426_at	-2.01
HSPC157	HSPC157 protein	219865_at	-2.01
MS4A1	membrane-spanning 4-domains, subfamily A, memb	217418_x_at	-1.99
FCRLM1	Fc receptor-like and mucin-like 1	235400_at	-1.97
GATM	glycine amidinotransferase (L-arginine:glycine amidi	216733_s_at	-1.95
MS4A1	membrane-spanning 4-domains, subfamily A, memb	210356_x_at	-1.90
NT5E	5'-nucleotidase, ecto (CD73)	227486_at	-1.89
FLJ13197	hypothetical protein FLJ13197	219871_at	-1.86
	CDNA FLJ34603 fis, clone KIDNE2013388	1559455_at	-1.85
	CDNA clone IMAGE:5301129	239278_at	-1.85

FLJ20701	hypothetical protein FLJ20701 ; hypothetical prote	219093_at	-1.84
MYBL1	v-myb myeloblastosis viral oncogene homolog (avia	213906_at	-1.83
MGC12965	similar to Cytochrome c, somatic	1554609_at	-1.82
LOC201895	Hypothetical protein LOC201895	224989_at	-1.81
USP53	Ubiquitin specific peptidase 53	230083_at	-1.76
PAPSS2	3'-phosphoadenosine 5'-phosphosulfate synthase 2	203058_s_at	-1.74
HLA-DQA1 ; HL	major histocompatibility complex, class II, DQ alpha	212671_s_at	-1.74
	Transcribed locus	238050_at	-1.70
DKFZp761P042	hypothetical protein DKFZp761P0423	235085_at	-1.69
MEF2C	MADS box transcription enhancer factor 2, polypep	209200_at	-1.64

#### B) Up and down regulated DEGs in PBMCs from patients with acute RSV infection

Gene symbol	Entrez gene name	Probe	Fold change
IFI27	interferon, alpha-inducible protein 27	211734_s_at	38.02
ALAS2	aminolevulinate, delta-, synthase 2 (sideroblastic/h	230180_at	33.45
HBM	hemoglobin mu chain	212070_at	28.29
OLFM4	olfactomedin 4	202458_at	22.78
LTF	lactotransferrin	215894_at	16.92
DEFA1 ; DEFA3	defensin, alpha 1 ; defensin, alpha 3, neutrophil-spe	1555687_a_a	12.56
	Transcribed locus	225207_at	11.82
HP ; HPR	haptoglobin ; haptoglobin-related protein	1555568_at	10.69
CEACAM8	carcinoembryonic antigen-related cell adhesion mol	1552552_s_a	8.75
HBD	hemoglobin, delta ; hemoglobin, delta	1553176_at	7.20
HP	haptoglobin	236356_at	6.35
ERAF	erythroid associated factor	219529_at	5.31
HBG1 ; HBG2	hemoglobin, gamma A ; hemoglobin, gamma A ; her	214470_at	5.28
S100P	S100 calcium binding protein P	219871_at	5.17
ANXA3	annexin A3	1553177_at	5.11
HBG1	hemoglobin, gamma A ; hemoglobin, gamma A	240723_at	5.00
SLC4A1	Solute carrier family 4, anion exchanger, member 1	223643_at	4.99
CA1	carbonic anhydrase I	210144_at	4.93
KCNJ15	potassium inwardly-rectifying channel, subfamily J,	218638_s_at	4.81
		212843_at	4.75
ARG1	arginase, liver	227232_at	4.56
HBG1 ; HBG2	hemoglobin, gamma A ; hemoglobin, gamma A ; her	228315_at	4.36
MYL4	myosin, light polypeptide 4, alkali; atrial, embryonic	210222_s_at	3.27
BPGM	2,3-bisphosphoglycerate mutase ; 2,3-bisphosphog	222141_at	3.27
GMPR	guanosine monophosphate reductase ; guanosine rr	230187_s_at	3.25
SLC25A37	solute carrier family 25, member 37	213650_at	3.24
RNASE2	ribonuclease, RNase A family, 2 (liver, eosinophil-de	210313_at	3.22
H1FO	H1 histone family, member 0	1554185_at	3.18
RRM2	ribonucleotide reductase M2 polypeptide	239744_at	3.09
SLC25A37	solute carrier family 25, member 37	222880_at	3.04

CDC2	Cell division cycle 2, G1 to S and G2 to M	235435_at	3.04
MYL4	myosin, light polypeptide 4, alkali; atrial, embryonic	210778_s_at	2.94
FCGR1A ; LOC4	Fc fragment of IgG, high affinity Ia, receptor (CD64	201963_at	2.93
HCAP-G	chromosome condensation protein G	1556283_s_a	2.90
SNCA	synuclein, alpha (non A4 component of amyloid pre	204131_s_at	2.89
TYMS	thymidylate synthetase	205931_s_at	2.88
S100A12	S100 calcium binding protein A12 (calgranulin C) ;	203968_s_at	2.76
SN	Sialoadhesin	202468_s_at	2.73
SLC25A37	solute carrier family 25, member 37	225655_at	2.70
ORF1-FL49	putative nuclear protein ORF1-FL49	219148_at	2.67
SLC25A37	solute carrier family 25, member 37	221932_s_at	2.66
C10orf3	chromosome 10 open reading frame 3	203764_at	2.65
RRM2	ribonucleotide reductase M2 polypeptide	207275_s_at	2.64
HMMR	hyaluronan-mediated motility receptor (RHAMM)	202068_s_at	2.61
APOBEC3B	apolipoprotein B mRNA editing enzyme, catalytic pc	214290_s_at	2.61
BUB1	BUB1 budding uninhibited by benzimidazoles 1 hom	209398_at	2.55
ALS2CR2	amyotrophic lateral sclerosis 2 (juvenile) chromoso	226099_at	2.54
MCEMP1	mast cell-expressed membrane protein 1	217202_s_at	2.45
TRIB1	tribbles homolog 1 (Drosophila)	218454_at	2.45
E2F2	E2F transcription factor 2	218280_x_at	2.43
KIAA0101	KIAA0101	202705_at	2.37
FCGR1A	Fc fragment of IgG, high affinity Ia, receptor (CD64	202201_at	2.37
IL1RN	interleukin 1 receptor antagonist	219555_s_at	2.37
SLC22A4	solute carrier family 22 (organic cation transporter	201292_at	2.36
KIF14	kinesin family member 14	205393_s_at	2.34
CHEK1	CHK1 checkpoint homolog (S. pombe)	206364_at	2.32
TOP2A	topoisomerase (DNA) II alpha 170kDa	205896_at	2.29
BM039	uncharacterized bone marrow protein BM039	212657_s_at	2.27
BLVRB	biliverdin reductase B (flavin reductase (NADPH))	216950_s_at	2.26
CCNB2	cyclin B2	202503_s_at	2.26
HIST2H2AA	histone 2, H2aa	228361_at	2.22
FLJ22662	hypothetical protein FLJ22662	202241_at	2.21
GLUL	glutamate-ammonia ligase (glutamine synthetase)	235568_at	2.21
ELL2	elongation factor, RNA polymerase II, 2	223266_at	2.20
HIST1H1C	histone 1, H1c	209642_at	2.19
HIST2H2AA	histone 2, H2aa	206632_s_at	2.18
LDLR	low density lipoprotein receptor (familial hyperchole	207165_at	2.15
ACSL1	acyl-CoA synthetase long-chain family member 1	209773_s_at	2.15
DLG7	discs, large homolog 7 (Drosophila)	218542_at	2.13
C14orf87	chromosome 14 open reading frame 87	242335_at	2.11
PBK	PDZ binding kinase	224707_at	2.09
UHRF1	ubiquitin-like, containing PHD and RING finger doma	221920_s_at	2.09
CTNNAL1	catenin (cadherin-associated protein), alpha-like 1	44673_at	2.08
CDC6	CDC6 cell division cycle 6 homolog (S. cerevisiae)	205863_at	2.06
CREB5	cAMP responsive element binding protein 5	202589_at	2.04

FOXO3A	forkhead box O3A	207827_x_at	2.04
FGFR1OP2	FGFR1 oncogene partner 2	218663_at	2.02
ACSL1	acyl-CoA synthetase long-chain family member 1	214511_x_at	2.01
FCER1A	Fc fragment of IgE, high affinity I, receptor for; alpha	202411_at	-3.98
DDX17	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17	211560_s_at	-3.24
GPR56	G protein-coupled receptor 56	240336_at	-3.08
PRSS23	protease, serine, 23	212768_s_at	-3.06
PTGDR	prostaglandin D2 receptor (DP)	202018_s_at	-2.96
CLEC4C	C-type lectin domain family 4, member C	205033_s_at	-2.91
PDK4	pyruvate dehydrogenase kinase, isoenzyme 4	231688_at	-2.88
MGC22265	hypothetical protein MGC22265	208470_s_at	-2.86
CLEC4C	C-type lectin domain family 4, member C	206676_at	-2.86
SH2D1B	SH2 domain containing 1B	206834_at	-2.56
NDUFS1	NADH dehydrogenase (ubiquinone) Fe-S protein 1, 2	206697_s_at	-2.45
CLIC3	chloride intracellular channel 3	219672_at	-2.40
KLRB1	killer cell lectin-like receptor subfamily B, member 1	204419_x_at	-2.39
FLJ13197	hypothetical protein FLJ13197	204351_at	-2.30
SH2D1B	SH2 domain containing 1B	209369_at	-2.29
EVL	Enah/Vasp-like	204848_x_at	-2.28
CRYGS	Crystallin, gamma S	205592_at	-2.25
TBC1D22A	TBC1 domain family, member 22A	205950_s_at	-2.24
SPON2	spondin 2, extracellular matrix protein	210119_at	-2.22
NCAM1	neural cell adhesion molecule 1	231078_at	-2.18
EVL	Enah/Vasp-like	206177_s_at	-2.17
	CDNA FLJ31683 fis, clone NT2RI2005353	213515_x_at	-2.17
RTN1	reticulon 1	210395_x_at	-2.16
KLHL22	kelch-like 22 (Drosophila)	203502_at	-2.16
	Full-length cDNA clone CSODI042YD07 of Placenta	204187_at	-2.15
GOLGA8A ; GOL	golgi autoantigen, golgin subfamily a, 8A ; golgi aut	222529_at	-2.10
LILRA4	leukocyte immunoglobulin-like receptor, subfamily A	206111_at	-2.10
LOC554206	hypothetical LOC554206	208886_at	-2.08
RGS3	Regulator of G-protein signalling 3	201890_at	-2.06
AKT3	v-akt murine thymoma viral oncogene homolog 3 (p	226179_at	-2.04
AASDH	2-aminoadipic 6-semialdehyde dehydrogenase	203213_at	-2.03
MXD4	MAX dimerization protein 4	210088_x_at	-2.01